

Joint Technical Report

VALIDATION WORKSHOPS FOR THE 2021 FERTILIZER STATISTICS

by the Fertilizer Technical Working Groups (FTWG)

Benin | Burkina Faso | Cote D'Ivoire | Mali | Senegal | Togo



Compilation of fertilizer statistics validated by the WGTE
Benin, Burkina Faso, Cote d'Ivoire, Mali, Senegal, Togo
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AfricaFertilizer.org is a joint initiative led by IFDC, in partnership with AFAP, IFA, FAO, and the Africa Union to facilitate exchange of information about soil fertility, fertilizers and good agricultural practices in Africa

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1 INTRODUCTION

1.1 Context

For the past four (4) years, the International Fertilizer Development Center (IFDC) through the AfricaFertilizer.Org and its EnGRAIS (Enhancing Growth through Regional Agricultural Input Systems) project, has been collaborating with the West African Fertilizer Association (WAFA) and jointly organizing annual workshops to validate national fertilizer statistics by Fertilizer Technical Working Groups (FTWGs) for at least six (6) countries in West Africa (Burkina Faso, Côte d'Ivoire, Ghana, Mali, Nigeria, Senegal). In

2021, this process has been extended to three other countries, namely Benin, Niger and Togo, where fertilizer consumption volumes have increased significantly in recent years, in order to have a more accurate picture of fertilizer consumption in the subregion.

This year, a first series of one-day national workshops was conducted, covering four (4) countries: Burkina Faso, Côte d'Ivoire, Mali, and Senegal, for which fertilizer statistics for the year 2021 were validated between February and May 2022. Following this first phase, and in agreement with the main partners, a one-and-a-half day joint Togo-Benin workshop was organized in July in Lome, Togo, to validate the fertilizer statistics for these two (2) countries. These workshops were facilitated and hosted by one of WAFAs members in the countries concerned, with strong involvement of national associations where they exist. The following were conducted:

Table 1: WGWP Workshop Agenda

Country	Sponsorship	Date of the workshop	Location of the workshop
Ivory Coast	SOLEVO	March 9th	Hotel Seen, Abidjan, Ivory Coast
Senegal	OCP	May 10	Colonia Hotel, Dakar, Senegal
Mali	TOGUNA	May 26	TOGUNA Conference Room, Bamako, Mali
Burkina Faso	AGRODIA	May 31st	Bravia Hotel, Ouagadougou, Burkina Faso
Togo-Benin	DEC Group	July 12 - 13	Hotel 2 Février, Lomé, Togo

This report compiles fertilizer statistics validated by the WGTEs of Benin, Burkina Faso, Côte d'Ivoire, Mali, Senegal and Togo.

1.2 Objective

The main objective of holding these workshops is to validate national fertilizer statistics data, with the support of representatives of public institutions and the private fertilizer sector, and to obtain recommendations for improving fertilizer statistics.

The specific objectives are to:

- Review, process and validate detailed 2021 statistical data on fertilizer production, imports, exports, apparent and actual consumption for each of the target countries;
- Present validated data and explain trends;
- Compare the apparent consumption with the actual consumption in case the information on the actual consumption is available;
- Identify the constraints / difficulties related to the validation process;
- Make recommendations to improve the validation process.

1.3 Expected results

The expected outcomes are:

- Fertilizer statistics data reviewed and validated;
- Trends and fluctuations in fertilizer volumes are explained;
- Recommendations are formulated and validated for the improvement of fertilizer statistics.

2 ORGANIZATION AND WORKING METHOD

2.1 Participation in the workshop

The workshops had a total of 122 participants from the public and private sectors, from Benin, Burkina Faso, Côte d'Ivoire, Mali, Senegal, and Togo. The public sector participants numbered 28 and included the National Directorates of Agriculture and their departments in charge of fertilizer and statistics, Customs departments, and national statistical agencies and/or institutes. 90 participants were from the private sector and included fertilizer manufacturers and importers operating in these 6 countries. Also participating were 4 participants from cotton companies in these target countries. Organizers included 3 members of AfricaFertilizer.Org and 8 members of the EnGRAIS project, joined by 8 IFDC members from the country offices, and AfricaFertilizer.Org partners including 2 members of Development Gateway and 2 members of Wallace & Associates.

A complete list of participants is attached to this report ([List of participants](#)).

2.2 Coordination and methodology

Each country workshop took place over a single day. Only the coupled Togo-Benin workshop took place in one and a half days.

Prior to each workshop, raw data on imports and exports for all types of fertilizers (HS 31, as well as HS 2510 (phosphate rock) and HS 2814 (anhydrous ammonium)) from customs are compiled and processed by AfricaFertilizer.Org. Next, representatives of ministries in charge of agriculture, statistical agencies, and public companies procuring fertilizers through tenders provide information on the volumes of fertilizers distributed to farmers. Finally, the private sector provides information on local fertilizer production.

Inconsistent or missing data are identified by AfricaFertilizer.Org and spreadsheets are prepared.

On the day of the workshop, the data processed by AfricaFertilizer.Org is submitted to the participants for comments and approval in group work.

The working method for the validation of statistics is based on a protocol established since 2012 between AfricaFertilizer.Org /IFDC, CountrySTAT and FAOSTAT, used to give a fair approximation of the real consumption. It is often difficult to interview all farmers to know the actual consumption. Therefore, apparent consumption is used as a proxy for actual consumption.

The concept of apparent consumption assumes stable inventory levels in the fertilizer distribution chain-importers, distributors, retailers, government agencies, and agricultural producers. It assumes that the supply (availability) of fertilizer is equal to consumption:

Apparent consumption = Production + Imports - Exports - Non-agricultural use of fertilizers

From this perspective, we use data on foreign trade (imports, exports) of fertilizer, nonfarm production, and fertilizer use to measure the apparent consumption of fertilizer by farmers.

After compiling the apparent consumption data, a reconciliation is made between apparent and actual consumption when actual consumption data is available.

3 FERTILIZER CONSUMPTION IN THE SIX COUNTRIES

The validated data are compiled and used to generate the apparent fertilizer consumption value table.

3.1 Benin

3.1.1 Presentation of validated statistics for 2021

Table 2: Summary of fertilizer statistics in Benin in 2021

SH10	Produit	Production	Importation	Exportation	Utilisation non- agricole	Importations agricoles 2021	Consommation apparente 2021	Consommation apparente 2020	Variation	Variation %
3105200000	NPK		176 295			176 295	176 295	195 320	-19 025	-10%
3102100000	Urée		63 780			63 780	63 780	72 801	-9 021	-12%
3102210000	Sulfate d'ammonium		943			943	943	356	587	165%
9999999990	Enhancers		73			73	73		73	
3101000000	engrais organiques	15 000	43			43	15 043	52	14 991	28736%
3104300000	sulfate de potasse		20			20	20		20	
3105400000	MAP		0			0	0		0	
3102300000	Nitrate d'ammonium		4 892		4 892	-	-		0	
3105600000	Engrais PK					-	-	1 811	-1 811	-100%
3102900000	Autres engrais azotés					-	-	45	-45	-100%
3104900000	Autres engrais potassiques					-	-	3	-3	-100%
Total engrais (tonnes)		15 000	246 046	-	4 892	241 153	256 153	270 388	-14 234	-5%

There is no primary production of mineral fertilizer in Benin. However, organic fertilizer production is being developed. BIOPHYTO is the main producer of organic fertilizers in the country. From 8,300 tons in 2020, it has increased to 15,000 tons in 2021. 60% of its production is for local consumption and 40% is exported to neighboring countries.

Fertilizer imports are mostly urea and NPK, representing 99% of agricultural imports in 2021. There are very few fertilizer exports from Benin to neighboring countries. In 2021, no exports have been reported.

By 2021, Benin's apparent fertilizer consumption has decreased by 5%, from 270,388 tons in 2020 to 256,153 tons in 2021.

3.1.2 Explanation of trends

This decline in apparent fertilizer consumption is due to the 11% drop in fertilizer imports from 241,153 tonnes to 217,498 tonnes in 2020, according to Customs records. The drop in fertilizer imports that affected fertilizer consumption is due to the increase in fertilizer prices. However, the National Committee for the Approval and Quality Control of Fertilizers (CONACE) has authorized and registered 260,599 tons of imported fertilizer in 2021. The difference between Customs and CONACE data is believed to be due to a time lag between CONACE authorizations and the dates of import, registration, and liquidation operations.

3.2 Burkina Faso

3.2.1 Presentation of validated statistics for 2021

Table 3: Summary of fertilizer statistics in Burkina Faso in 2021

SH Code	Produit	Production	Importation	Exportation	Utilisation non-agricole	Importations agricoles	Consommation apparente 2021	Consommation apparente 2020	Variation	Variation %
3105200000	NPK		116 163	80		116 163	116 083	176 329	- 60 246	-34%
3102100000	Urée		72 066	391	0	72 066	71 675	66 289	5 386	8%
3105300000	DAP		4 296			4 296	4 296	3 192	1 104	35%
3101000000	engrais organiques	3 500	567	20		567	4 047	2 450	1 597	65%
2510000000	Burkina Phosphate	2 400					2 400	2 803	- 403	-14%
3104200000	KCI		1 403			1 403	1 403	3 901	- 2 498	-64%
3104900000	autres engrais potassiques		0			0	0	-	0	
3102500000	Nitrate de sodium		20		20		-	-	-	
3102210000	Sulfate d'ammonium							176	- 176	-100%
3102300000	Nitrate d'ammonium							-	-	
3102600000	Nitrate de calcium							-	-	
3102900000	Autres engrais azotés							-	-	
3102900000	Autres engrais phosphatés							-	-	
Total engrais (tonnes)		5 900	194 515	491	20	194 495	199 904	255 140	(55 236)	-22%

There is production of rock phosphate from the mine at Kodjari in eastern Burkina Faso, extracted by the Société d'Exploitation des Phosphates du Burkina (SEPB). SEPB also has a grinding unit that provides phosphate in 50 kg bags for local consumption, which is used directly as a soil conditioner. The quantity of phosphate produced, which was 2,803 tons in 2020, has dropped to 2,400 tons in 2021. In addition to phosphate production, two (2) companies, namely the Compagnie Industrielle de Production Agricole et Marchande (CIPAM) and Industries Chimiques Fertilisantes de l'Afrique (IFCA), have fertilizer blending units and produce different NPK formulas that are also intended for local consumption. By 2021, both blending units were shut down because the cost of formulating fertilizer locally was uncompetitive due to rising raw material prices and production costs. In addition, several organic fertilizer production units exist, the most important of which are AROM-H/SOLFERTILE, BELWET, FASO BIOGAZ and GREEN CROSS. The volumes produced have increased from 1,700 tons in 2020 to 3,500 tons in 2021.

NPK fertilizer and urea remain the most imported fertilizers in Burkina Faso, accounting for 97% of agricultural imports in 2021. There is very little export of fertilizer from Burkina Faso to neighboring countries. In 2021, 491 tons of fertilizer were exported.

Apparent fertilizer consumption in Burkina Faso has decreased by 22% in 2021, from 255,140 tons in 2020 to 199,904 tons in 2021.

The actual fertilizer consumption data presented here are from the Permanent Agricultural Surveys 2021 (EPA, 2021) of the Ministry of Agriculture, Animal Resources and Fisheries (MAAH). According to the EPA data, actual fertilizer consumption reached 308,841 tons in 2021. This actual consumption was compared with the apparent consumption. A large difference of 108,937 tons was observed.

Table 4: Comparative analysis of apparent and actual fertilizer consumption in Burkina Faso in 2021

Indicateurs	2021
Consommation Apparente	199 904
Consommation Réelle	308 841
Consommation Apparente – Consommation Réelle	-108 937

Source: MAAH, EPA 2021

3.2.2 Explanation of trends

This decrease in apparent fertilizer consumption is due to a 23% decrease in imports, from 251,377 tons in 2020 to 194,495 tons in 2021. Importers cited soaring fertilizer prices in 2021 as the main reason for the reduction in imports. They were unable to keep up with high world prices. Other reasons for the low imports were the various reversals in the allocation of cotton fertilizer by suppliers with prices below the international market price.

A comparative analysis of apparent and actual fertilizer consumption in 2021 indicates a difference of 108,937 tons, which stakeholders attribute to stock carryovers. They also noted undeclared fertilizer imports by small traders from the Ghana and Niger borders. In this case, it is possible that larger quantities were imported, although the quantities recorded are small.

3.3 Ivory Coast

3.3.1 Presentation of validated statistics for 2021

Table 5: Summary of fertilizer statistics in Côte d'Ivoire in 2021

SH Code	Produit	Production	Importation	Exportation	Utilisation non-agricole	Importations agricoles	Consommation apparente 2021	Consommation apparente 2020	Variation	Variation %
3104200000	KCl		112 190	3 827	4	112 186	108 359	106 893	1 466	
3103101000	TSP		97 762	0		97 762	97 762	64 734	33 028	
3102100000	Urée		99 176	8 364	189	98 987	90 623	69 569	21 054	
3105200000	NPK		120 268	66 504		120 268	53 764	4 656	49 108	
3105300000	DAP		51 330	4 779		51 330	46 550	35 916	10 634	
3102210000	Sulfate d'ammonium		29 409	0		29 409	29 409	14 244	15 164	
9999999990	Dolomie, Kieserite, Biostimulant		256 075	3	233 366	22 709	22 706	81	22 625	
2510000000	Phosphate naturel		15 710			15 710	15 710	5 139	10 571	
3105600000	engrais PK		6 016			6 016	6 016	6 787	-771	
3102600000	Nitrate de calcium		3 898			3 898	3 898	2 048	1 849	
3105510000	engrais NP		3 315			3 315	3 315	14	3 301	
3104300000	sulfate de potasse		1 682	13	0	1 682	1 670	1 117	552	
3101000000	engrais organiques	4 562	2 759	2 281		2 759	5 040	4 450	591	
3102900000	autres engrais azotés		384	94		384	290	840	-550	
3105400000	MAP		275		4	271	271	274	-3	
3102400000	CAN		472	263		472	210	644	-435	
3105700000	engrais NK		27			27	27		27	
3102300000	Nitrate d'ammonium		22 229		22 229		-		0	
3102500000	Nitrate de sodium		0		0		-		0	
3013900000	autres engrais phosphatés		585	64	585		(64)	0	-64	
3104900000	autres engrais potassiques		1	368		1	(367)	0	-367	
2834210000	nitrate de potassium							67	-67	
Total engrais (tonnes)		4 562	823 563	86 560	256 377	567 186	485 619	317 473	168 147	53%

There is no primary production of mineral fertilizers in Côte d'Ivoire but there is a development of organic fertilizer production. ELEPHANT VERT is the main producer of organic fertilizers. The company has produced 1,500 tons in 2020 and 4,562 tons in 2021.

Côte d'Ivoire imports mainly five (5) simple or binary fertilizers which are KCl, urea, TSP, DAP, ammonium sulfate. Primary fertilizers are generally imported in bulk. Most of these fertilizers are used as raw materials for the production of blended fertilizers. Five (5) companies (YARA, SOLEVO (ex Louis Dreyfus Commodities (LDC)), AGRO WEST AFRICA, Société d'Engrais d'Aménagement et de Phytosanitaire de la Côte d'Ivoire (SEAP CI), SEA INVEST) have fertilizer blending units and produce blended fertilizers for the Ivorian market. The remainder is NPK complexes for direct application. The blended volumes represent on average ¾ of annual imports. These NPK fertilizers are also exported to the sub-region, mainly to Burkina and Mali.

Apparent fertilizer consumption in Côte d'Ivoire has increased by 53%, from 317,473 tons in 2020 to 485,619 tons in 2021.

3.3.2 Explanation of trends

This increase in apparent fertilizer consumption is due to a 45% increase in imports, from 390,935 tons in 2020 to 567,186 tons in 2021. According to importers, a large proportion of fertilizer has been imported to build up a stock, which they estimate at 130,000 tons. This stock of fertilizer has been built up in anticipation of a potential increase in fertilizer prices during the 2022 season.

3.4 Mali

3.4.1 Presentation of validated statistics for 2021

Table 6: Summary of fertilizer statistics in Mali in 2021

Code Hs	Produit	Production	Importation	Exportation	Utilisation non-agricole	Importations agricoles	Consommation apparente 2021	Consommation apparente 2020	Variation	Variation %
3102100000	Urée		192 127	5 509		192 127	186 618	201 598	-14 980	
3103900000	phosphate naturel	65 000	4 561			4 561	69 561	64 651	4 910	
3101000000	engrais organiques	58 000	0	1 203		0	56 798	69 206	-12 408	
3104200000	KCL		42 611		0	42 611	42 611	77 152	-34 541	
3105200000	NPK		76 867	47 102		76 867	29 765	44 689	-14 925	
3105300000	DAP		29 817	54		29 817	29 763	26 394	3 370	
3102210000	Sulfate d'ammonium		18 595	135	108	18 487	18 352	17 873	479	
3105400000	MAP		16 765	193		16 765	16 572	51 689	-35 117	
3104300000	sulfate de potasse		92			92	92	429	- 337	
9999999990	Sulfate de Magnesium		50			50	50	59	- 9	
3102900000	autres engrais azotés		53		3	50	50		50	
3102300000	Nitrate d'ammonium		33 826		33 826		-		0	
3102600000	Nitrate de calcium		8 751		8 751		-		0	
2834210000	nitrate de potassium		82		82		-		0	
3102500000	Nitrate de sodium		12		12		-		0	
Total engrais (tonnes)		123 000	424 208	54 196	42 782	381 426	450 231	553 741	-103 510	-19%

There is a production of rock phosphate from the exploitation and extraction at Tilemsi mine by the company TOGUNA AGRO-INDUSTRIE. The production of phosphate was 57,600 tons in 2020 and 65,000 tons in 2021. The phosphate produced is sold directly to cotton producers. Besides the production of rock phosphate, ELEPHANT VERT, ORGAFERT and PROFEBFA produce and market organic fertilizers. The production of organic fertilizers was 58,000 tons in 2021, compared to 69,000 tons in 2020.

Mali imports mainly five (5) simple and binary fertilizers: urea, MAP, ammonium sulfate, KCL and DAP. These fertilizers are largely used as raw materials for the manufacture of blended fertilizers. Doucouré and Partenaire Agro Industries (DPA), TOGUNA AGRO-INDUSTRIES and SOGEFERT have blending units, located respectively in Ségou, Bamako and Sikasso, and produce different NPK formulas, notably cotton and cereal fertilizers for local consumption and the sub-region (mainly for Burkina Faso). The quantities produced in these blending units were not available at the time of the fertilizer statistics validation workshop. The remainder, essentially urea and DAP, is used directly on crops. Imports of NPK were also recorded for direct application.

Apparent fertilizer consumption in Mali has decreased by 19% to 2021, from 553,741 tons in 2020 to 450,231 tons in 2021.

The actual consumption of fertilizer presented here is the sum of the quantities of subsidized and unsubsidized fertilizer. The Direction Nationale de l'Agriculture (DNA) and the Compagnie Malienne de

Développement des Textiles (CMDT) provided information on the quantities of subsidized fertilizer. In contrast, the private sector provided information on the quantities of unsubsidized fertilizer purchased by farmers. In 2021, actual fertilizer consumption was 456,557 tons. A comparison of this actual consumption with the apparent consumption showed a slight difference of 6,326 tons of fertilizer.

Table 7: Comparative analysis of apparent and actual fertilizer consumption in Mali in 2021

Indicateurs	2021
Consommation Apparente	450 231
Consommation Reelle	456 557
Consommation Apparente - Consommation Réelle	-6 326

3.4.2 Explanation of trends

According to private actors in the fertilizer sub-sector, the decrease in apparent fertilizer consumption is due to the decrease in imports. The drop in imports, which also affected apparent consumption, is linked to the rise in fertilizer prices on the international market. However, CMDT has reduced its orders for fertilizer in 2021 because of the stock of fertilizer not distributed in 2020 due to the farmers' boycott of cotton.

The slight difference between apparent and actual consumption is explained, according to the actors, by a carry-over of fertilizer stocks.

3.5 Senegal

3.5.1 Presentation of validated statistics for 2021

Table 8: Summary of fertilizer statistics in Senegal in 2021

Nouveau SH10	Engrais Produit	Production	Importation	Exportation	Utilisation non-agricole	Importations agricoles	Consommation apparente 2021	Consommation apparente 2020	Variation	Variation %
251000000	phosphate naturel	553 447		553 447			-			
310520000	NPK	105 000	7 495	45 010		7 495	67 484	97 310	(29 825)	
310530000	DAP	30 000	203	22 078		203	8 125	17 306	(9 182)	
310210000	Urée		17 500	6 039	4 000	13 500	7 460	65 396	(57 936)	
310100000	engrais organiques	1 400	3 913	326	281	3 632	4 706	6 443	(1 737)	
310420000	KCI		25 548	172	21 000	4 548	4 376	7 644	(3 268)	
310430000	sulfate de potasse		3 803	362		3 803	3 440	3 497	(57)	
310540000	MAP	55 000	281	53 887		281	1 394	936	458	
310260000	Nitrate de calcium		1 110	46		1 110	1 064	1 879	(816)	
310290000	autres engrais azotés		672			672	672	212	460	
283421000	nitrate de potassium		670	22		670	648	1 145	(497)	
999999990	Magnesium sulphate		575			575	575		575	
310490000	autres engrais potassiques		361	20		361	341	60	281	
310240000	Nitrate d'ammonium calcique		264			264	264	135	129	
310221000	Sulfate d'ammonium		290	69		290	221	1 907	(1 686)	
999999990	Biostimulant		195		10	185	185		185	
310570000	Engrais NK		146			146	146	13	133	
310560000	Engrais PK		51			51	51	108	(57)	
310230000	Nitrate d'ammonium		18 776		18 776		-		-	
310390000	autres engrais phosphatés		136	1 500	0	136	(1 364)	19	(1 383)	
Total engrais (tonnes) 2021		744 847	81 987	682 979	44 067	37 920	101 153	204 010	(102 857)	-50%

Senegal has several primary rock phosphate production units. The Société d'Etudes et de Réalisation des Phosphates de Matam (SERPM), the Société Minière de la Vallée du Fleuve (SOMIVA), La Sénégalaise des Phosphates (SEPHOS) in Matam and Les Industries Chimiques du Sénégal (ICS) in Ndomor Diop and more recently in Keur Mor Fall and Tobene, produce phosphate rock. In 2021, rock phosphate production (excluding ICS production) was 553,447 tonnes compared to 306,642 tonnes in 2020. This rock phosphate production is totally exported. ICS transforms all of its rock phosphate production into phosphoric acid at its Darouou site. As with rock phosphate production, a large part (85%) of ICS' phosphoric acid production is

exported. The remaining 15% is used to produce DAP, MAP and NPK complex fertilizers at their granulation unit in Mbao, a suburb of Dakar. To produce NPK, ICS imports non-phosphate fertilizers, mostly ammonia, urea, and KCl, which are blended with locally produced phosphate fertilizers. In 2021, ICS produced 30,000 tons of DAP, 55,000 tons of MAP, and 105,000 tons of NPK, 36% of which is destined for the local market and the rest (64%) exported to neighboring countries. In addition, the Sahelian Company for Agribusiness Distribution (SEDAB) has a fertilizer mixing unit in Dakar. Its production capacity is 40 tons per hour. Apart from the production of mineral fertilizers, SEDAB and ELEPHANT VERT are the main producers of organic fertilizers in the country. In 2021, the production of organic fertilizers was 1,400 tons.

Apparent fertilizer consumption in Senegal has decreased by 50%, from 204,010 tons in 2020 to 101,153 tons in 2021.

During the session, participants were given access to reports and data on the quantities distributed under the subsidy program in 2021. These data come from the Directorate of Agriculture. In 2021, 165,398 tons of fertilizer were distributed for the subsidy program. The comparison between the quantities of subsidized fertilizer distributed and the apparent consumption, showed a difference of 64,245 tons.

Table 9: Comparative analysis of apparent consumption and subsidized fertilizers in Senegal in 2021

Indicateurs	2021
Consommation Apparente	101 153
Engrais subventionnés	165 398
Consommation Apparente – Engrais subventionnés	-64 245

3.5.2 Explanation of trends

This decrease in apparent consumption is linked to the 69% decrease in imports, from 123,799 tons in 2020 to 37,920 tons in 2021. According to stakeholders, the decrease in imports that affected apparent consumption is due to the increase in fertilizer prices in 2021. Delayed notifications of the subsidy program with prices set lower than world market prices is an additional cause. However, 21,000 tons of KCl and 4,000 tons of urea were imported by ICS to make NPK. These quantities have not been counted as fertilizer imports, to avoid double counting. They are considered to be fertilizers for non-agricultural use.

The comparative analysis between apparent consumption and subsidized quantities of fertilizer in 2021 shows a difference of 64,245 tons, which the importers attribute to a carryover of fertilizer from 2020. The importers indicated that a large portion of the urea imported in 2020 would not have been sold. This would be between 20,000 and 25,000 tons. The availability of this stock made it possible to cover part of the urea needs in the 2021 crop year.

3.6 Togo

3.6.1 Presentation of validated statistics for 2021

Table 10: Summary of fertilizer statistics in Togo in 2021

SH10	Produit	Production	Importation	Exportation	Utilisation non-agricole	Importations agricoles 2021	Consommation apparente 2021	Consommation apparente 2020	Variation	Variation %
3105200000	NPK		20 438	1 420		20 438	19 018	68 781	-49 762	
3102100000	Urée		266	80	0	266	186	37 166	-36 980	
3103900000	autres engrais phosphatés		1			1	1		1	
2510000000	Phosphate naturel					-	-		0	
3101000000	engrais organiques		49			49	49	36	14	
Total engrais (tonnes)		-	20 754	1 500	0	20 754	19 254	105 982	-86 728	-82%

There is rock phosphate production in Togo from the Société Nouvelle des Phosphates du Togo (SNPT). It has an extraction site at Hahotoé and a rock phosphate processing unit at Kpémé, with a capacity of 4,800,000 tons per year. However, these rock phosphates have never been used for local agricultural purposes. The rock phosphate production is totally exported. In 2021, SNPT produced and exported 1,456,368 tons of rock phosphate. In addition to phosphate production, the Compagnie Togolaise d'Intrants Agricoles (CIAT) is the only fertilizer blending unit in Togo with a production capacity of 120 tons per hour. It is owned by the Swiss group MAMBO and is located in the industrial free zone of Lomé. In 2021, CIAT experienced technical and administrative difficulties that caused the cessation of its fertilizer production.

Togo mainly imports NPK and urea, which represent 99% of agricultural imports. The volumes of fertilizer imported and distributed in Togo come mainly from orders placed by the government and the Nouvelle Société Cotonnière du Togo (NSCT). There are very few exports from Togo to countries in the sub-region. In 2021, 1,500 tons of fertilizer were exported.

Apparent fertilizer consumption in Togo has decreased significantly by 82%, from 105,982 tons in 2020 to 19,254 tons in 2021.

The data on actual fertilizer consumption presented here are taken from the databases of the Centrale d'Approvisionnement et de Gestion des Intrants Agricoles (CAGIA) and the Agricultural Statistics Directorate of the Ministry of Agriculture. In 2021, actual fertilizer consumption was 84,090 tons. This actual consumption was compared to the apparent consumption and a difference of 64,836 tons of fertilizer was found.

Table 11: Comparative analysis of apparent and actual fertilizer consumption in Togo in 2021

Indicateurs	2021
Consommation Apparente	19 254
Consommation Reelle	84 090
Consommation Apparente – Consommation Réelle	-64 836

3.6.2 Explanation of trends

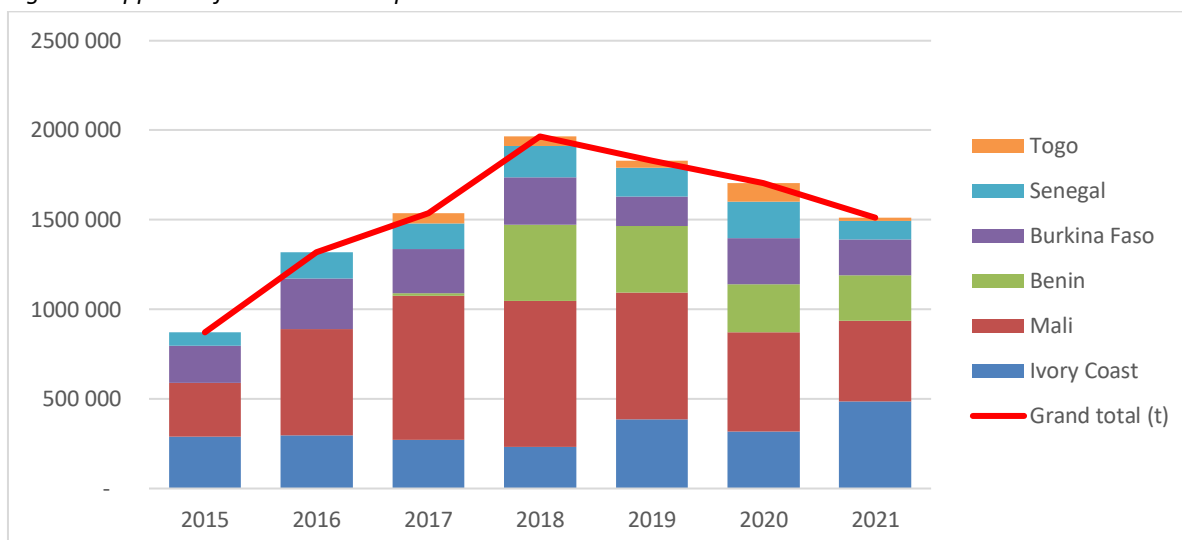
This drop in apparent consumption is due to the 83% drop in imports, from 121,368 tons in 2020 to 20,754 tons in 2021. According to stakeholders, the drop in imports is due to the reduction in orders from the state due to the availability of more than 85,000 tons of food fertilizer, representing the residual stock at the end of 2020. In addition, according to importers, rising fertilizer prices on the international market did not allow them to import more fertilizer because they were unable to keep up with the high prices.

The difference of 64,836 tons of fertilizer between actual and apparent consumption is explained by the carry-over to 2021 of the residual stock of fertilizer available at the end of 2020.

3.7 Compilation of apparent consumption in the six countries

In 2021, the apparent consumption of fertilizer in the six (6) countries was 1,512,314 tons. When compared to the 2020 data, there was a decrease of 11% for the six (6) countries.

Figure 1: Apparent fertilizer consumption in the 6 countries



According to stakeholders, this decline in fertilizer consumption is due to reduced imports. Rising fertilizer prices are the main reason for the decline in fertilizer consumption. Several countries have not been able to purchase and import the quantities of fertilizer needed for the 2021 crop year. Notable variations include a 50% decrease in Senegal, and 80% in Togo. In the case of Togo, the existence of a large residual stock from 2020 explains the sharp decline in consumption. Despite the downward trend in consumption for all six countries, Côte d'Ivoire recorded a 53% increase in fertilizer consumption. In the specific case of Côte d'Ivoire, this increase is explained by the building of a stock of fertilizer in anticipation of a worsening price crisis.

4 RECOMMENDATIONS AND CONCLUSIONS

4.1 Recommendations

During the data validation, a number of findings were made with lessons that should be taken into account in the validation process to produce a better estimate of fertilizer consumption and to ensure that reliable statistics are available on a sustainable basis.

Challenges include:

- In the customs database, some lines lack precision on the description of the imported/exported product and on the names of the importers/exporters. This makes it impossible to accurately determine the type of fertilizer imported/exported (NPK, urea, etc.) and its use (agricultural or industrial).
- The possible existence of informal import flows by small traders who do not pass through customs checkpoints. These informal imports would represent a significant share of the fertilizer used in Burkina Faso. This makes it difficult to assess the quantities actually imported at the national level.
- The difficulty of taking into account local production and imports of organic fertilizers in the calculation of apparent consumption, with the risk of inflating the figures for apparent consumption. These organic fertilizers represent a large share of the fertilizer used in Mali.
- The lack of data to determine actual fertilizer consumption, particularly in Benin and Côte d'Ivoire. In cases where data on actual fertilizer consumption was available, such as in Burkina Faso, Mali, and Togo, it was difficult to disaggregate this consumption by product and by crop.

To better assess the fertilizer consumption figures, it was recommended to:

- Educate, inform, and invite Customs in target countries to share the minimum information required for imports and exports that will help the GTTE improve data quality and detail, including product code and description, importer code or name. Where it is not possible to obtain this information, especially importer information due to its sensitivity, Customs could provide clarification to the GTTE that would help determine end uses (e.g. agricultural or industrial).
- Raise awareness and inform the customs services of the target countries about the regulatory framework in place (requirement for approval and/or import authorization), which will help strengthen the inspection and control of fertilizers and collect reliable information on fertilizer flows.
- Pay particular attention to data on the production and import of organic fertilizers, to avoid inflating fertilizer consumption figures.
- Plan annual statistical surveys of public structures, fertilizer distributors and take into account the volumes of tenders, in order to have reliable and updated data on the real consumption of fertilizer by product and by crop.

4.2 Conclusion

The fertilizer statistics validation workshops went well, providing updated data on fertilizer production, imports, exports, and consumption in Benin, Burkina Faso, Côte d'Ivoire, Mali, Senegal, and Togo. Since the first editions in 2012, the GTTE workshops have gained importance among stakeholders, especially private operators who are widely present and increasingly open to providing data on fertilizer production and/or sales. However, the methodology adopted in 2012 needs to be updated to provide more direct and reliable information on NPK produced and consumed and on actual consumption by crop in addition to the traditional table on apparent consumption.

For more information and data on fertilizers and agriculture in Africa and in different countries:

AfricaFertilizer.Org

Website: www.africafertilizer.org

Facebook: www.facebook.com/AfricaFertilizer.org

Twitter: <http://twitter.com/africafertilizer>

5 ANNEXES

5.1 List of participants by workshop

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GTTE Senegal - May 10, 2022

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GTTE Mali - May 26, 2022

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GTTE Benin - Togo - July 12 and 13, 2022

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5.2 Meeting agenda

AGENDA: National Workshop for the Validation of Fertilizer Statistics 2021 by the Fertilizer Technical Working Groups (GTTE)

Hours	Activities	Responsible for
08:00 - 08:30	<ul style="list-style-type: none"> Welcome and registration of participants 	<ul style="list-style-type: none"> IFDC
08:30 - 08:40	<ul style="list-style-type: none"> IFDC Welcome Address 	<ul style="list-style-type: none"> IFDC
08:40 - 08:50	<ul style="list-style-type: none"> WAFA Speeches 	<ul style="list-style-type: none"> WAFA
08:50 - 09:00	<ul style="list-style-type: none"> Sponsor speeches 	<ul style="list-style-type: none"> Sponsor
09:00 - 09:15	<ul style="list-style-type: none"> Presentation of the participants 	<ul style="list-style-type: none"> Participants
09:15 - 09:30	<ul style="list-style-type: none"> Workshop program, objectives and expected results Questions - Answers 	<ul style="list-style-type: none"> AFO
09:30 - 10:00	<ul style="list-style-type: none"> Presentation of AFO activity Review of statistics for previous years and for 2020 (data, sources, quality, etc.) National data available for 2021, and validation methodology Questions - Answers 	<ul style="list-style-type: none"> AFO
10:00 - 10:30	<ul style="list-style-type: none"> Coffee break + Family photo 	
10:30 - 12:30	Group 1: Review and validation of fertilizer import statistics for 2021 Group 2: Review and validation of fertilizer production and export statistics for 2021	<ul style="list-style-type: none"> Participants
12:30 - 14:00	Lunch break	
14:00 - 15:30	Group 1: Review and validation of fertilizer import statistics for 2021 (continued) Group 2: Review and validation of fertilizer production and export statistics for 2021 (continued)	<ul style="list-style-type: none"> Participants
15:30 - 16:00	Coffee break	
16:00 - 17:00	Presentation of validated data, explanation of trends and forecasts for the coming season in the context of rising fertilizer prices	<ul style="list-style-type: none"> AFO
17:00	Closing remarks + End of work	<ul style="list-style-type: none">

AGENDA: Joint Togo-Benin Workshop for the Validation of Fertilizer Statistics 2021 by the Fertilizer Technical Working Groups (GTTE)

Day 1		
Hours	Activities	Responsible for
	Tuesday, July 12, 2022	
08:30 - 09:00	<ul style="list-style-type: none"> Welcome and registration of participants 	<ul style="list-style-type: none"> Jacqueline
09:00 - 09:40	<ul style="list-style-type: none"> IFDC Welcome Address Speeches sponsor DEC Speeches representing Benin Speeches representing Togo 	<ul style="list-style-type: none"> Emmanuel DEC Representative Benin Representative Togo
09:40 - 10:00	<ul style="list-style-type: none"> Presentation of the participants 	<ul style="list-style-type: none"> Participants
10:00 - 10:30	<ul style="list-style-type: none"> Workshop program, objectives and expected results Questions - Answers 	<ul style="list-style-type: none"> Samuel
10:30 - 11:00	<ul style="list-style-type: none"> Coffee break + Family photo 	<ul style="list-style-type: none">
11:00 - 11:45	<ul style="list-style-type: none"> AfricaFertilizer.Org activity presentation Review of statistics for previous years and for 2020 (data, sources, quality, etc.) National data available for 2021, and validation methodology Questions - Answers 	<ul style="list-style-type: none"> Samuel

11:45 - 12:30	<ul style="list-style-type: none"> Group work: Review and validation of fertilizer import and export statistics for 2021 	<ul style="list-style-type: none"> Country Working Group
12:30 - 14:00	<ul style="list-style-type: none"> Lunch break 	
14:00 - 16:30	<ul style="list-style-type: none"> Group work: Review and validation of fertilizer import and export statistics for 2021 (continued) 	<ul style="list-style-type: none"> Country Working Group
16:30 - 17:00	<ul style="list-style-type: none"> Coffee break + End of work 	
16:00 - 17:00	<ul style="list-style-type: none"> Group work: Writing the summary note 	<ul style="list-style-type: none"> Group reporter
17:00	<ul style="list-style-type: none"> End 1^{ère} day 	

Day 2		
Hours	Activities	Responsible for
	Wednesday, July 13, 2022	
08:30 - 09:00	<ul style="list-style-type: none"> Welcome and registration of participants 	<ul style="list-style-type: none"> Jacqueline
09:00 - 09:10	<ul style="list-style-type: none"> Summary of the 1^{ère} day 	<ul style="list-style-type: none"> Samuel
09:10 - 10:30	<ul style="list-style-type: none"> Crop year balance and fertilizer volumes consumed in 2020 and 2021 Togo Crop year and fertilizer consumption volumes in 2020 and 2021 Benin Questions and answers 	<ul style="list-style-type: none"> Representative Togo Representative Benin Participants
10:30 - 11:00	<ul style="list-style-type: none"> Coffee break 	<ul style="list-style-type: none"> Participants
11:00 - 12:45	<ul style="list-style-type: none"> Presentation of 2020 and 2021 data validated by country, explanation of trends Program and initiative and fertilizer volume forecasts for 2022 in the context of rising fertilizer prices Recommendations 	<ul style="list-style-type: none"> Reporter by country Representative by country Participants
12:45 - 13:00	<ul style="list-style-type: none"> Closing words 	<ul style="list-style-type: none"> DEC Emmanuel Representative Benin Representative Togo
13:00	<ul style="list-style-type: none"> Lunch + end 	

5.3 Terms of reference

TERMS OF REFERENCE: National Workshop for the Validation of Fertilizer Statistics 2021 by the Fertilizer Technical Working Groups (GTTE)

Context

For the past four years, the International Fertilizer Development Center (IFDC) through the AfricaFertilizer.org and its EnGRAIS (Enhancing Growth through Regional Agricultural Input Systems) project, has been collaborating with the West African Fertilizer Association (WAFA) and to jointly organize annual workshops to validate national fertilizer statistics by the Fertilizer Technical Working Groups (FTWGs) for at least 6 West African countries (Burkina Faso, Côte d'Ivoire, Ghana, Mali, Nigeria, Senegal) . In 2021, this process was extended to three other countries, namely Benin, Niger and Togo, where fertilizer consumption volumes have increased significantly in recent years, in order to get a more accurate picture of fertilizer consumption in the subregion.

Following the 2021 editions, a series of one-day national workshops for validation of the 2021 fertilizer statistics by the Fertilizer Technical Working Groups (FTWGs) is planned for this year, between March and

April 2022, with coverage for at least 9 countries (Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, Niger, Nigeria, Senegal, Togo).

Objectives

The main objective of this workshop is to validate the national statistical data on fertilizers, with the support of representatives of public institutions and the private fertilizer sector, and to obtain recommendations for improving fertilizer statistics .

- Review, process and validate detailed 2021 statistical data on fertilizer production, imports, exports, apparent and actual consumption
- Present validated data and explain trends
- Compare apparent consumption with actual consumption where actual consumption information is available
- Identify constraints / difficulties related to the process
- Recommendation to improve the validation process

Expected results of the workshop

- Fertilizer statistics data reviewed and validated
- Trends and fluctuations in fertilizer volumes are explained
- Recommendations are proposed and validated for the improvement of fertilizer statistics

Participation in the workshop

Each country workshop will have at least 5 public sector delegates and at least 5 private sector representatives.

National institutions invited to participate in this workshop include:

- The Directorate of Agricultural Statistics of the Ministry of Agriculture;
- The bodies of the Ministry of Agriculture responsible for the management and control of fertilizers;
- The Directorate of Customs Statistics of the General Directorates of Customs;
- The National Institute of Statistics;

Private structures and organizations invited to participate in this workshop include:

- Private operators in the fertilizer sector (importers, manufacturers, producers);
- Professional associations and interprofessions in charge of fertilizer-consuming crops (e.g. cotton);
- Key technical partners, projects and programs working on fertilizer issues.

Organization and working method

- Each country workshop will take place over a single day (from 9am to 5pm).
- Participating institutions and organizations are invited to collect and share with IFDC and WAFA, 2 weeks prior to the workshop, data available at their level on
 - Production capacity and fertilizer production;
 - Imports and exports (in raw format - see below) ;
 - The actual consumption of fertilizers, their use per crop and per cultivated area.
- This data will be compiled and processed by AfricaFertilizer.Org, and sent to participants prior to the workshop.
- These data will then be analyzed and validated in country group work, with technical assistance from IFDC and WAFA.
- Finally, the results will be presented in plenary sessions and recommendations will be made to ensure a wide dissemination of these results and to improve the quality of the information collected.

Data format

For import and export data

- Disaggregated import and export data, generally available from Customs and fertilizer entry and exit points (Port Authorities)
- Note that only aggregate data by product and year are published. Operator or value information is used only to verify and validate fertilizer types, volumes, and agricultural or non-agricultural use of fertilizer, but is not published.
- Data should be provided in Excel format for further analysis by participants. Scanned or PDF files are not acceptable. They must contain the following information:
 - Customs codes in Harmonized System format
 - The exact description of the goods in addition to the customs nomenclature
 - Net volumes in kg or tons
 - The value (local currency, or in US Dollar)
 - The name of the importer or exporter
 - The country of origin and/or destination
 - The date of the operation (Day/Month/Year)

Table 1 Example of import data (here data from Ghana for 2015)

Mois	jour	An	Code-HS	Produit-(description-1)	Produit-(description-2)	Point-d'ent	Pays-d'origi	Poids-net-(kg)	Valeur-en-doua	Importateur
01	09	2015	3102100000	PRILLED-UREA-IN-BULK	(-3,000-MT)	TMA1	LY	-3,000,000.00	-3,746,912.56	YARA-GHANA-LTD
01	12	2015	3105900000	384-BAGS-X-25KG-(FERTILIZER-MAP)		TMA1	IL	-11,228.96	-45,836.58	DIZENGOFF-GHANA-LIMITED
01	12	2015	3105900000	FERTILIZERMILLION-MORE-15[7]15[2MG+ME-(528-BAGS-X-25KG)		TMA1	IL	-11,608.90	-47,387.44	DIZENGOFF-GHANA-LIMITED
01	12	2015	3105900000	FERTILIZERMULTICOTE-15[7]15+2MGO	(42-BAGS-X-25-KG)	TMA1	IL	-1,542.14	-6,295.00	DIZENGOFF-GHANA-LIMITED
01	13	2015	3105300000	10-X-20'-CONTS-STC	DI[AMMONIUM-PHOSPHATE-(DAP)	TMA1	MA	-250,000.00	-506,526.14	LOUIS-DREYFUS-COMMODITIES-GHANA-LTD
01	13	2015	3104900000	WETTABLE-MICRONIZED-MINERAL-FERTIZER[HERBAGREEN,-67-CARTONS-WITH-E		KIA1	TH	-449.24	-23,240.12	FEVAK-COMPANY-LIMITED*****
01	13	2015	3104900000	WETTABLE-MICRONIZED-MINERAL-FERTIZER[HERBAGREEN,-8-BAGS-OF-25-KGS-E		KIA1	TH	-212.76	-11,006.85	FEVAK-COMPANY-LIMITED*****
01	15	2015	3102300000	AMMONIUM-NITRATE		TMA1	CN	-115,598.00	-210,107.20	ANIGORD-FAMILLE-COMPANY-LIMITED
01	19	2015	3105590000	FERTILIZER-20115-[COATED-FERTILIZE	RFLXICOTE-VU-LR-18-19-[5-[9+2M	TKD1	BE	-61,200.00	-349,406.86	PLANTATIONS-SOCFINAF-GH-LTD
01	20	2015	3105100000	48-TONS-CALCIUM-NITRATE-FERTILIZER	(CALCIUM)-IN-25KG-BAGS	TMA1	NO	-48,000.00	-59,001.27	YARA-GHANA-LIMITED
01	20	2015	3102100000	ALIMENTAR20-BAGS-X-1200-KG=-24T-PER-CONTAINER-X-5		TKD1	BE	-120,000.00	-271,584.48	GOLDEN-STAR-(BOGOSO-/-PRESTEA)-LTD
02	11	2015	3105200000	NPK-FERTILIZER-23[10]05-IN-BULK		TMA1	NO	-1,275,000.00	-1,723,842.51	YARA-GHANA-LIMITED
02	12	2015	3102500000	SODIUM-NITRATE-MIN.-98%PACKING:-9]-BAGS-X-25-KGS		TKD1	BE	-24,000.00	-64,189.44	MAXAM-GHANA-LIMITED(FORMERLY-UEE-EX
02	13	2015	3102300000	AMMONIUM-NITRATE-[EMULSION-GR	1440-BIG-BAGS-X-1250-KGS=-1800-00	TKD1	RU	-1,800,000.00	-3,042,665.02	AEL-MINING-SERVICES-(GH)-LTD
02	13	2015	3102300000	AMMONIUM-NITRATE-[POROUS-PRILLS	800-BAGS-X-1250-KGS=-1-000-000-KG	TKD1	SE	-1,000,000.00	-2,442,418.13	AEL-MINING-SERVICES-(GH)-LTD
02	13	2015	3102210000	AMMONIUM-SULPHATE-STANDARD-IN-E	AGRICULTURAL-FERTILIZER	TMA1	BE	-1,060,000.00	-1,005,809.94	LOUIS-DREYFUS-COMMODITIES-GHANA-LTD
02	16	2015	3105200000	FERTILIZERCRISTALAND-15.30.15.-NPK		TMA1	LB	-138.78	-1,352.40	NAD[ADRA-COMPANY-LIMITED
02	16	2015	3105590000	FERTILIZERCRISTALAND-20.20.20.-NPK		TMA1	LB	-324.45	-3,161.70	NAD[ADRA-COMPANY-LIMITED
02	16	2015	3105590000	FERTILIZERCRISTALAND-28.14.14.-NPK		TMA1	LB	-58.14	-566.54	NAD[ADRA-COMPANY-LIMITED

For fertilizer production data

- Volumes produced per year and by type of fertilizer, with, if possible, an indication of the formulas produced and their use by crop (for example, NPK 15 15 15 + 6S + 1B mixed for application on cotton in Côte d'Ivoire)
- Information on the location, operator, production and storage capacities of the manufacturing and mixing units

For fertilizer consumption data

- Volumes consumed per year, per crop and per type of fertilizer.
- Information generally coming from the statistical services of the Ministry of Agriculture, public companies sourcing through tenders, annual reports of agriculture, studies of the sector, etc.

Table 2 Example of consumption data by product and by crop (here in Mali)

Cultures	Types d'engrais utilisés	Volumes d'engrais appliqués (en tonnes)			
		2014/2015	2015/2016	2016/2017	2017/2018
Coton	Urée	28 158	28 501	34 277	36 650
	NPK 14-18-18 + 6S + 1B	92 377	101 659	122 010	135 222
	Phosphate Naturel Tilemsi	0	3 605	8 450	17 762
	Engrais organique	1 684	2 287	1 057	8 710
Total Coton		122 219	136 051	165 794	198 344
Maïs	Urée	105 451	81 336	93 541	107 275
	NPK 15-15-15 plus 17-17-17 plus 17-17 + 4S plus 12 + 4,5S + 0,3Zn	86 906	63 207	74 482	96 344
	NPK 16-26- NPK 17- NPK 17-17-17 plus NPK 16-26-				
	Engrais organique	6 644	5 875	6 136	4 904
Total Maïs		199 002	150 418	174 159	208 524
Riz	Urée	59 469	47 802	72 040	64 337
	NPK 15-15-15 plus 17-17-17 plus 17-17 + 4S plus 12 + 4,5S + 0,3Zn	3 936	7 304	9 350	9 276
	NPK 16-26- NPK 17- NPK 17-17-17 plus NPK 16-26-				
	DAP	39 390	28 146	38 614	32 413
Total Riz		83 253	120 004	106 025	

TERMS OF REFERENCE: Joint Togo-Benin Workshop for the Validation of Fertilizer Statistics 2021 by the Fertilizer Technical Working Groups (GTTE)

Context

For the past four years, the International Fertilizer Development Center (IFDC) through the AfricaFertilizer.org and its EnGRAIS (Enhancing Growth through Regional Agricultural Input Systems) project, has been collaborating with the West African Fertilizer Association (WAFA) and jointly organizing annual workshops to validate national fertilizer statistics by Fertilizer Technical Working Groups (FTWGs) for at least 6 West African countries (Burkina Faso, Côte d'Ivoire, Ghana, Mali, Nigeria, Senegal). In 2021, this process was extended to 3 other countries, namely Benin, Niger and Togo, where fertilizer consumption volumes have increased significantly in recent years, in order to have a more accurate picture of fertilizer consumption in the subregion. Thus, governments, development organizations, and international trade partners rely on this fertilizer information to formulate development policies and strategies.

This year, we organized a series of national workshops for Burkina Faso, Côte d'Ivoire, Ghana, Mali, Nigeria, and Senegal, for which the 2021 statistics were validated between February and May 2022 by the national Fertilizer Technical Working Groups.

Following this first phase, and in agreement with the main partners, we are organizing a coupled Togo-Benin edition from July 12 to 13 in Lomé to validate the statistics on fertilizers, by the national Technical Working Groups on Fertilizers (TWG) of 2021 for these 2 countries.

Objectives

The main objective of this workshop is to validate the national fertilizer statistics data for Togo and Benin, with the support of representatives of public institutions and the private fertilizer sector, and to obtain recommendations for improving fertilizer statistics.

- Review, process and validate detailed 2021 statistical data on production, imports, exports, apparent and actual consumption
- Present validated data and explain trends
- Compare apparent consumption with actual consumption where actual consumption information is available
- Identify constraints / difficulties related to the process
- Recommendation to improve the validation process

Expected results of the workshop

- Fertilizer statistics data reviewed and validated

- Trends and fluctuations in fertilizer volumes are explained
- Recommendations are proposed and validated for the improvement of fertilizer statistics

Participation in the workshop

This workshop will bring together 30 participants from the public, private and civil society sectors of both countries and the organizers.

The public institutions from Togo and Benin invited to participate in this workshop include: key representatives of the public services from both countries , including:

- Ministry of Agriculture bodies in charge of fertilizer management and control
- The agricultural statistics departments of the Ministry of Agriculture;
- The Customs Statistics Departments of the Customs General Directorates;
- National statistical institutes ;

Private structures and organizations invited to participate in this workshop include:

- Private operators in the fertilizer sector (importers, manufacturers, producers);
- Professional associations and interprofessions in charge of fertilizer-consuming crops (e.g. cotton);
- Key technical partners, projects and programs working on fertilizer issues.

Organizers:

- IFDC - EnGRAIS
- IFDC - AfricaFertilizer.Org

Organization and working method

- Participating institutions and organizations are invited to collect and share with IFDC and WAFA, 2 weeks prior to the workshop, data available at their level on
 - Production capacity and fertilizer production;
 - Imports and exports (in raw format - see below) ;
 - The actual consumption of fertilizers, their use per crop and per cultivated area.
- This data will be compiled and processed by AfricaFertilizer.Org, and sent to participants prior to the workshop.
- These data will then be analyzed and validated in country group work, with technical assistance from IFDC and WAFA.
- Finally, the results will be presented in plenary sessions and recommendations will be made to ensure a wide dissemination of these results and to improve the quality of the information collected.

Data format

For import and export data

- Disaggregated import and export data, generally available from Customs and fertilizer entry and exit points (Port Authorities)
- Note that only aggregate data by product and year are published. Operator or value information is used only to verify and validate fertilizer types, volumes, and agricultural or non-agricultural use of fertilizer, but is not published.
- Data should be provided in Excel format for further analysis by participants. Scanned or PDF files are not acceptable. They must contain the following information:
 - Customs codes in Harmonized System format
 - The exact description of the goods in addition to the customs nomenclature
 - Net volumes in kg or tons
 - The value (local currency, or in US Dollar)

- The name of the importer or exporter
- The country of origin and/or destination
- The date of the operation (Day/Month/Year)

Table 3 Example of import data (here data from Togo for 2015)

NTS	DESIGNATION/PRODUIT	MODELE	REGIME	CODE_ADD	DATE_ENREG	NUM_QUITT#	DATE_QUITTA#	FRET_INTERIEFRET	ETRANK	ASSURANCE	PAYS_EXPORT	CODE_PAYS	(PAYS_ORIGIN	PAYS_DESTIN	POIDS_NET
3101000000	Engrais d'origi2 PALETTS/CF IM4		4077	000	03/03/15	R 21374	04/03/15	0	237519	79173	Belgique	NL	Pays-bas	Togo	1095
3102900000	Autres engrai: ENGRAIS NPK IM4		4094	000	12/03/15	R 1096	13/03/15	0	12585600	314640	TOGO (Zone F ZF		TOGO (Zone F	Togo	207000
3102300000	Nitrate d'amn NITRATE D'AN IM4		4055	000	07/04/15	R 80424	03/09/15	0	5026045	800000	Afrique du Sud ZA		Afrique du Sud	Togo	20640
3102900000	Autres engrai: ENGRAIS NPK IM4		4093	128	30/04/15	R 1969	18/05/15	0	1,333E +09	33329125	Turquie	TR	Turquie	Togo	25000000
3104900000	Autres engrai: ENGRAIS CHU DS4		4000	000	31/05/15	R 536	31/05/15	0	1	1	Ghana	GH	Ghana	Togo	4500
3105200000	Engrais minér: SACS ENGRAI IM4		4000	000	02/06/15	R 3985	02/06/15	0	289000	8215	Mali	ML	Mali	Togo	6860
3104900000	Autres engrai: SACS D'ENGR DS4		4000	000	09/06/15	R 559	12/06/15	0	1	1	Ghana	GH	Ghana	Togo	4000
3102100000	Urée, même e UREE 46% N IM4		4055	128	26/06/15	R 83903	15/09/15	0	248726401	2174474	Libyenne, Jarr LY		Libyenne, Jarr	Togo	8500000
3104900000	Autres engrai: SACS D'ENGR DS4		4000	000	29/06/15	R 605	30/06/15	0	1	1	Ghana	GH	Ghana	Togo	4000
3102300000	Nitrate d'amn 3200 SACS DE IM4		4055	000	07/07/15	R 89963	07/10/15	0	7609020	524760	France	FR	France	Togo	80000
3104900000	Autres engrai: ENGRAIS NPK IM4		4000	000	10/07/15	R 94885	23/10/15	0	4,291E +09	465000	Maroc	MA	Maroc	Togo	18000000
3104900000	Autres engrai: ENGRAIS NPK IM4		4000	000	15/07/15	R 4578	15/07/15	0	9200000	230000	Côte d'Ivoire	CI	Côte d'Ivoire	Togo	200000
3104900000	Autres engrai: SACS D'ENGR DS4		4000	000	20/07/15	R 651	22/07/15	0	1	1	Ghana	GH	Ghana	Togo	4000
3105900000	Autres Engrai: 16000 SACS D IM4		4094	128	31/07/15	R 3232	05/08/15	0	34560000	11520000	TOGO (Zone F ZF		TOGO (Zone F	Togo	800000
3102100000	Urée, même e 4000 SACS D'Y IM4		4094	128	31/07/15	R 3233	05/08/15	0	8010000	2670000	TOGO (Zone F ZF		TOGO (Zone F	Togo	200000

For fertilizer production data

- Volumes produced per year and by type of fertilizer, with, if possible, an indication of the formulas produced and their use by crop (for example, NPK 15 15 15 + 6S + 1B mixed for application on cotton in Côte d'Ivoire)
- Information on the location, operator, production and storage capacities of the manufacturing and mixing units

For fertilizer consumption data

- Volumes consumed per year, per crop and per type of fertilizer.
- Information generally coming from the statistical services of the Ministry of Agriculture, public companies sourcing through tenders, annual reports of agriculture, studies of the sector, etc.

Table 4 Example of consumption data by product and by crop (here in Benin)

Engrais	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
NPK 14-23-14 +5S +1B (coton)	44 782	63 476	52 024	86 853	107 442	56 843	73 659	116 062	144 593	182 352
NPKSBZn (cultures vivrières)	8 000	12 352	32 452	29 557	24 367		11 900	21 251	33 000	14 343
Urée (toutes les cultures)	4 000		20 631	39 430	28 025	16 991	32 092	47 519	51 538	65 875
KCl (palmier à huile)	1 000	1 000			1 910	1 773	760			473
K2SO4 (ananas)	1 000	500			683		114		57	
Total	58 782	77 329	105 107	155 839	162 427	75 607	118 525	184 832	229 189	263 042

5.4 Fertilizer HS Codes

HS Code	AfricaFertilizer.Org 10 code	Fertilizer Name (industry)
281410	2814100000	Anhydrous Ammonia
281420	2814200000	Ammonium Hydroxide
283421	2834210000	Potassium Nitrate
310100	3101000000	Organic Fertilizers
310210	3102100000	Urea 46 0 0
310221	3102210000	Ammonium sulphate 21 0 0 + 24S
310229	3102290000	Double Salts of AS or AN
310230	3102300000	Ammonium nitrate
310240	3102400000	CAN 27 0 0
310250	3102500000	Sodium Nitrate
310260	3102600000	Calcium Nitrate
310310	3103100000	SSP 0 18 0
310310	3103101000	TSP 0 46 0
310420	3104200000	MOP 0 0 60

310430	3104300001	SOP 0 0 50
310520	3105201304	NPK 3.5 3.5 49
310520	3105511404	NP 3 22 0 + 18S
310520	3105511405	NP 3 22 0 + 27S
310520	3105202102	NPK 12.5 4 8
310520	3105202104	NPK 11 6 7 + 2MgO
310520	3105202311	NPK 15 9 20 + 9.5 S + TE
310520	3105202314	NPK 16 8.5 23 + 5S
310520	3105202318	NPK 18.5 9 24 + 2.2S + 2MgO
310520	3105202319	NPK 10.5 5 27 + 5MgO
310520	3105202321	NPK 12 6 20 + 4MgO
310520	3105202338	NPK 12 6 20 + TE
310520	3105202339	NPK 12 9 34 + TE
310520	3105202340	NPK 18 3 25
310520	3105202515	NPK 15 15 15
310520	3105202533	NPK 15 15 15 + 4CaO
310520	3105202534	NPK 15 15 15 + 6S + 1MgO
310520	3105202535	NPK 19 17 14 + 3S + 4MgO + 0.4Zn
310520	3105202539	NPK 14 10 18
310520	3105202543	NPK 19 17 14 + 4S + 3MgO + 0.4Zn
310520	3105202544	NPK 12 11 18 + TE
310520	3105202545	NPK 15 15 15 + 6S + 1B
310520	3105202546	NPK 14 18 18
310520	3105202550	NPK 14 12 14
310520	3105202619	NPK 13 13 21
310520	3105202629	NPK 10 12 32 + 3MgO + TE
310520	3105202809	NPK 11 22 16
310520	3105202821	NPK 13 23 17 + 4.5S + 3MgO
310520	3105202907	NPK 12 22 22 + 0.6 S
310520	3105202908	NPK 10 20 20
310520	3105202913	NPK 13.5 27 27
310520	3105203401	NPK 20 10 5 + 5S
310520	3105203403	NPK 23 10 5 + 3S + 2MgO + 0.3Zn
310530	3105300000	DAP 18 46 0
310540	3105400000	MAP 11 52 0
310560	3105601201	PK 0 9 18 + TE
310560	3105601301	PK 0 5 20 + TE
310560	3105601501	PK 0 12 12 + TE
310560	3105601802	PK 0 23 19 + 6.5S + 5MgO + 10CaO
310560	3105601803	PK 0 23 19
310520	3105202630	NPK 16 11 29